

PATENT ABSTRACTS OF JAPAN

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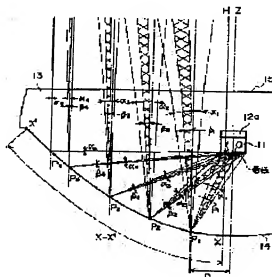
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(54) REFLECTION-TYPE LIGHT-EMITTING DIODE

(57)Abstract:

PURPOSE: To make it possible to control almost all the directions of light beams emitted from a light emitting element, by defining one point located near to an intersection of a curve and a focus passing line in parallel with an axis and the other point of intersection on the focus side from the axis, and forming a concave reflection face in a way that a line between these points is turned around the axis.

CONSTITUTION: A reflective face 14 is formed around a light emitting element 11. A point (X) on a light emitting face is defined as a point located near to an intersection of a parabola and a parallel line with an axis (Z) at a center (O) of the light emitting face. The point (X) passes a point (f) formed in a place other than the location of an electrode. On the other hand a point (X') is defined as an intersection of a parabola and an almost vertical line to the central axis (Z). The point (X') is located on the point (f) side from the central axis (Z). The reflection face with a concave shape is formed in a way that a line between X to X' is rotated around the axis (Z). As a result, almost all emitting directions of light beams from the light emitting element 11 can be controlled and the intensity of light at the central axis can be increased.



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